

WHAT IS CLAIMED IS:

- 1           1.     A method, comprising:  
2           receiving a selection of customer sites;  
3           querying a database to determine geographical locations of the selected network  
4     sites;  
5           rendering, in a graphical user interface, representations of the selected customer  
6     sites in a map at the geographical location of the selected sites in the map;  
7           receiving selection of at least one network service provider (NSP);  
8           querying the database to determine network infrastructure of the selected NSP and  
9     geographical locations of the determined network infrastructure; and  
10          rendering representations of the determined network infrastructure in a map at the  
11     determined geographical locations of the determined network infrastructure to render a  
12     visualization of the geographical locations of the selected customer sites and network  
13     infrastructure of the selected at least one NSP in the map.
- 1           2.     The method of claim 1, wherein the determined network infrastructure  
2     comprises at least one of a switch and a network path, and wherein the network  
3     infrastructure geographical location comprises at least one of a switch site location and a  
4     route of the network path.
- 1           3.     The method of claim 1, wherein the map comprises a street map, and  
2     wherein the rendered map visualizes transportation corridors, and wherein the rendered  
3     customer sites and network infrastructure are visualized superimposed over rendered  
4     transportation corridors in the street map.
- 1           4.     The method of claim 1, further comprising:  
2     receiving user selection of one rendered customer site;  
3     querying the database to determine information on the selected customer site; and  
4     rendering the determined information on the selected customer site in a dialog  
5     box.

1           5.       The method of 1, further comprising:  
2           querying connection information in the database to determine connections  
3       between the rendered customer sites; and  
4           rendering connections between the customer sites in the map to visualize the  
5       determined connections.

1           6.       The method of claim 5, further comprising:  
2           receiving a query including search criteria with respect to a parameter concerning  
3       network connectivity at the customer sites;  
4           querying the database to determine connections between customer sites having  
5       network connectivity information satisfying the search criteria included with the query;  
6       and  
7           rendering the determined connections in a different visual manner than those  
8       connections that do not satisfy the search criteria.

1           7.       The method of claim 5, wherein the connection information includes  
2       information on at least one of connected sites, connection bandwidth, and connection  
3       circuit types.

1           8.       The method of claim 1, further comprising:  
2           receiving a definition of a buffer region with respect to a selected customer site;  
3           querying the database to determine NSP network infrastructure located within the  
4       defined buffer region;  
5           rendering the buffer region around the rendering of the selected customer site in  
6       the map; and  
7           rendering the determined NSP network infrastructure within the defined buffer  
8       region in the map.

1           9.       The method of claim 8, wherein NSP network infrastructure rendered  
2       within the defined buffer region is rendered differently than NSP network infrastructure  
3       rendered outside of the buffer region.

1           10.    The method of claim 8, further comprising:  
2           generating a report identifying at least one of: the network infrastructure located  
3           within the buffer region, the NSP managing the identified network infrastructure, and a  
4           distance of the identified network infrastructure from the selected customer site for which  
5           the buffer region is defined.

1           11.    The method of claim 1, wherein the network infrastructure includes  
2           network switches and network paths, wherein rendering the representations of the  
3           determined network infrastructure comprises rendering representations of the determined  
4           switches in the map, further comprising:  
5           querying the database to determine network paths between the network switches  
6           rendered in the map; and  
7           rendering the network paths between the network switches in the map.

1           12.    The method of claim 11, wherein the map comprises a street map, and  
2           wherein the network paths are rendered superimposed over transportation corridors  
3           rendered on the map.

1           13.    The method of claim 11, further comprising:  
2           receiving user selection of a proposed path between the customer site and one  
3           network switch;  
4           rendering the proposed path in the map; and  
5           generating and rendering information on the proposed path in the map, including  
6           information on the distance of the proposed path.

1           14.    The method of claim 1, further comprising:  
2           receiving selection of a plurality of customer sites rendered in the map;  
3           receiving a definition of parameters of a buffer region with respect to the selected  
4           customer sites;  
5           determining buffer regions for each of the selected customer sites satisfying the  
6           defined parameters for the buffer region;

7            querying the database to determine NSP network infrastructure located within  
8 each determined buffer region;  
9            rendering each determined buffer region around each selected customer site in the  
10 map; and  
11            rendering the determined NSP network infrastructure within each defined buffer  
12 region in the map.  
13

1            15.    The method of claim 14, further comprising:  
2            generating a report identifying at least one of: the network infrastructure located  
3 within the determined buffer regions; the NSPs managing the identified network  
4 infrastructure within the determined buffer regions; and, for each selected customer site, a  
5 distance of the identified network infrastructure from the selected customer site within  
6 the buffer region for the selected customer site.

1            16.    A system, comprising:  
2            a processor;  
3            an output device in communication with the processor;  
4            code executed by the processor to cause the processor to perform:  
5                (i) receiving a selection of customer sites;  
6                (ii) querying a database to determine geographical locations of the selected  
7 network sites;  
8                (iii) rendering, in a graphical user interface, representations of the selected  
9 customer sites in a map at the geographical location of the selected sites in the  
10 map;  
11                (iv) receiving selection of at least one network service provider (NSP);  
12                (v) querying the database to determine network infrastructure of the  
13 selected NSP and geographical locations of the determined network  
14 infrastructure; and  
15                (vi) rendering representations of the determined network infrastructure in  
16 a map at the determined geographical locations of the determined network

17 infrastructure to render a visualization of the geographical locations of the  
18 selected customer sites and network infrastructure of the selected at least one NSP  
19 in the map.

1 17. The system of claim 16, wherein the determined network infrastructure  
2 comprises at least one of a switch and a network path, and wherein the network  
3 infrastructure geographical location comprises at least one of a switch site location and a  
4 route of the network path.

1 18. The system of claim 16, wherein the map comprises a street map, and  
2 wherein the rendered map visualizes transportation corridors, and wherein the rendered  
3 customer sites and network infrastructure are visualized superimposed over rendered  
4 transportation corridors in the street map.

1 19. The system of claim 16, wherein the code further causes the processor to  
2 perform:  
3 receiving user selection of one rendered customer site;  
4 querying the database to determine information on the selected customer site; and  
5 rendering the determined information on the selected customer site in a dialog  
6 box.

1 20. The system of claim 16, wherein the code further causes the processor to  
2 perform:  
3 querying connection information in the database to determine connections  
4 between the rendered customer sites; and  
5 rendering connections between the customer sites in the map to visualize the  
6 determined connections.

1 21. The system of claim 20, wherein the code further causes the processor to  
2 perform:

3           receiving a query including search criteria with respect to a parameter concerning  
4   network connectivity at the customer sites;  
5           querying the database to determine connections between customer sites having  
6   network connectivity information satisfying the search criteria included with the query;  
7   and  
8           rendering the determined connections in a different visual manner than those  
9   connections that do not satisfy the search criteria.

1           22.    The system of claim 16, wherein the connection information includes  
2   information on at least one of connected sites, connection bandwidth, and connection  
3   circuit types.

1           23.    The system of claim 16, wherein the code further causes the processor to  
2   perform:  
3           receiving a definition of a buffer region with respect to a selected customer site;  
4           querying the database to determine NSP network infrastructure located within the  
5   defined buffer region;  
6           rendering the buffer region around the rendering of the selected customer site in  
7   the map; and  
8           rendering the determined NSP network infrastructure within the defined buffer  
9   region in the map.

1           24.    The system of claim 23, wherein NSP network infrastructure rendered  
2   within the defined buffer region is rendered differently than NSP network infrastructure  
3   rendered outside of the buffer region.

1           25    The system of claim 24, wherein the code further causes the processor to  
2   perform:  
3           generating a report identifying at least one of: the network infrastructure located  
4   within the buffer region, the NSP managing the identified network infrastructure, and a

5 distance of the identified network infrastructure from the selected customer site for which  
6 the buffer region is defined.

1           26.     The system of claim 16, wherein the network infrastructure includes  
2 network switches and network paths, wherein rendering the representations of the  
3 determined network infrastructure comprises rendering representations of the determined  
4 switches in the map, and wherein the code further causes the processor to perform:  
5           querying the database to determine network paths between the network switches  
6 rendered in the map; and  
7           rendering the network paths between the network switches in the map.

1           27.     The system of claim 26, wherein the map comprises a street map, and  
2 wherein the network paths are rendered superimposed over transportation corridors  
3 rendered on the map.

1           28.     The system of claim 26, wherein the code further causes the processor to  
2 perform:  
3           receiving user selection of a proposed path between the customer site and one  
4 network switch;  
5           rendering the proposed path in the map; and  
6           generating and rendering information on the proposed path in the map, including  
7 information on the distance of the proposed path.

1           29.     The system of claim 16, wherein the code further causes the processor to  
2 perform:  
3           receiving selection of a plurality of customer sites rendered in the map;  
4           receiving a definition of parameters of a buffer region with respect to the selected  
5 customer sites;  
6           determining buffer regions for each of the selected customer sites satisfying the  
7 defined parameters for the buffer region;

8            querying the database to determine NSP network infrastructure located within  
9    each determined buffer region;  
10          rendering each determined buffer region around each selected customer site in the  
11    map; and  
12          rendering the determined NSP network infrastructure within each defined buffer  
13    region in the map.  
14

1            30.    The system of claim 16, wherein the code further causes the processor to  
2    perform:

3            generating a report identifying at least one of: the network infrastructure located  
4    within the determined buffer regions; the NSPs managing the identified network  
5    infrastructure within the determined buffer regions; and, for each selected customer site, a  
6    distance of the identified network infrastructure from the selected customer site within  
7    the buffer region for the selected customer site.

1            31.    An article of manufacture for causing operations to be performed, wherein  
2    the operations comprise:

3            receiving a selection of customer sites;  
4            querying a database to determine geographical locations of the selected network  
5    sites;  
6            rendering, in a graphical user interface, representations of the selected customer  
7    sites in a map at the geographical location of the selected sites in the map;  
8            receiving selection of at least one network service provider (NSP);  
9            querying the database to determine network infrastructure of the selected NSP and  
10    geographical locations of the determined network infrastructure; and  
11          rendering representations of the determined network infrastructure in a map at the  
12    determined geographical locations of the determined network infrastructure to render a  
13    visualization of the geographical locations of the selected customer sites and network  
14    infrastructure of the selected at least one NSP in the map.



1           32.     The article of manufacture of claim 31, wherein the determined network  
2 infrastructure comprises at least one of a switch and a network path, and wherein the  
3 network infrastructure geographical location comprises at least one of a switch site  
4 location and a route of the network path.

1           33.     The article of manufacture of claim 31, wherein the map comprises a  
2 street map, and wherein the rendered map visualizes transportation corridors, and  
3 wherein the rendered customer sites and network infrastructure are visualized  
4 superimposed over rendered transportation corridors in the street map.

1           34.     The article of manufacture of claim 31, wherein the operations further  
2 comprise:  
3           receiving user selection of one rendered customer site;  
4           querying the database to determine information on the selected customer site; and  
5           rendering the determined information on the selected customer site in a dialog  
6 box.

1           35.     The article of manufacture of claim 31, wherein the operations further  
2 comprise:  
3           querying connection information in the database to determine connections  
4 between the rendered customer sites; and  
5           rendering connections between the customer sites in the map to visualize the  
6 determined connections.

1           36.     The article of manufacture of claim 35, wherein the operations further  
2 comprise:  
3 receiving a query including search criteria with respect to a parameter concerning  
4 network connectivity at the customer sites;  
5           querying the database to determine connections between customer sites having  
6 network connectivity information satisfying the search criteria included with the query;  
7 and

8 rendering the determined connections in a different visual manner than those  
9 connections that do not satisfy the search criteria.

1 37. The article of manufacture of claim 35, wherein the connection  
2 information includes information on at least one of connected sites, connection  
3 bandwidth, and connection circuit types.

1 38. The article of manufacture of claim 31, wherein the operations further  
2 comprise:  
3 receiving a definition of a buffer region with respect to a selected customer site;  
4 querying the database to determine NSP network infrastructure located within the  
5 defined buffer region;  
6 rendering the buffer region around the rendering of the selected customer site in  
7 the map; and  
8 rendering the determined NSP network infrastructure within the defined buffer  
9 region in the map.

1 39. The article of manufacture of claim 38, wherein NSP network  
2 infrastructure rendered within the defined buffer region is rendered differently than NSP  
3 network infrastructure rendered outside of the buffer region.

1 40. The article of manufacture of claim 38, wherein the operations further  
2 comprise:  
3 generating a report identifying at least one of: the network infrastructure located  
4 within the buffer region, the NSP managing the identified network infrastructure, and a  
5 distance of the identified network infrastructure from the selected customer site for which  
6 the buffer region is defined.

1 41. The article of manufacture of claim 31, wherein the network infrastructure  
2 includes network switches and network paths, wherein rendering the representations of

3 the determined network infrastructure comprises rendering representations of the  
4 determined switches in the map, further comprising:  
5 querying the database to determine network paths between the network switches  
6 rendered in the map; and  
7 rendering the network paths between the network switches in the map.

1 42. The article of manufacture of claim 41, wherein the map comprises a  
2 street map, and wherein the network paths are rendered superimposed over transportation  
3 corridors rendered on the map.

1 43. The article of manufacture of claim 41, wherein the operations further  
2 comprise:  
3 receiving user selection of a proposed path between the customer site and one  
4 network switch;  
5 rendering the proposed path in the map; and  
6 generating and rendering information on the proposed path in the map, including  
7 information on the distance of the proposed path.

1 44. The article of manufacture of claim 31, wherein the operations further  
2 comprise:  
3 receiving selection of a plurality of customer sites rendered in the map;  
4 receiving a definition of parameters of a buffer region with respect to the selected  
5 customer sites;  
6 determining buffer regions for each of the selected customer sites satisfying the  
7 defined parameters for the buffer region;  
8 querying the database to determine NSP network infrastructure located within  
9 each determined buffer region;  
10 rendering each determined buffer region around each selected customer site in the  
11 map; and  
12 rendering the determined NSP network infrastructure within each defined buffer  
13 region in the map.

1           45.     The article of manufacture of claim 44, wherein the operations further  
2     comprise:  
3           generating a report identifying at least one of: the network infrastructure located  
4     within the determined buffer regions; the NSPs managing the identified network  
5     infrastructure within the determined buffer regions; and, for each selected customer site, a  
6     distance of the identified network infrastructure from the selected customer site within  
7     the buffer region for the selected customer site.